## WHAT IS CLAIMED IS:

A process for synthesizing a rubbery polymer that
 comprises copolymerizing at least one conjugated diolefin monomer and at least one functionalized monomer in an organic solvent at a temperature which is within the range of 20°C to about 100°C, wherein the polymerization is initiated with an anionic initiator, wherein the
 polymerization is conducted in the presence of an alkali alkoxide, and wherein the functionalized monomer has a structural formula selected from the group consisting of

15 
$$CH_3$$
  $CH_2$   $CHCH_2$   $CH_3$   $CHCH_2$   $CH_3$   $CHCH_2$   $CH_3$   $CHCH_2$   $CH_3$   $CH_3$   $CH_3$   $CH_3$   $CH_3$   $CH_3$   $CH_4$   $CH_5$   $CH_$ 

wherein n represents an integer from 4 to about 10,

CH<sub>3</sub>

CHCH<sub>2</sub>

CHCH<sub>2</sub>

$$CH_3$$
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 
 $CHCH_2$ 

wherein n represents an integer from 0 to about 10 and wherein m represents an integer from 0 to about 10, with the proviso that the sum of n and m is at least 4;

5 (c) CH<sub>3</sub> C = CH<sub>2</sub> CHCH<sub>2</sub> CHCH<sub>3</sub>

wherein R and R' can be the same or different and represent 15 allyl groups or alkoxy groups containing from about 1 to about 10 carbon atoms;

20
$$CH_{3}$$

$$C \rightarrow CH_{2}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CHCH_{2} \rightarrow CH_{2}$$

$$CH_{3} \rightarrow CH_{2}$$

$$CH_{3} \rightarrow CH_{2}$$

wherein n represents an integer from 1 to about 10, and wherein R and R' can be the same or different and represent alkyl groups containing from about 1 to about 10 carbon atoms;

(e) 
$$CH_3$$

$$C = CH_2$$

$$CHCH_2$$

$$CH_3$$

$$CHCH_2$$

$$CH_3$$

$$CHCH_2 - CH_2)_n - N$$

$$CH_2)_m$$

wherein m represents an integer from 1 to about 10 and wherein m represents an integer from 4 to about 10;

wherein x represents an integer from about 1 to about 10, wherein n represents an integer from 0 to about 10 and wherein m represents an integer from 0 to about 10, with the proviso that the sum of n and m is at least 4;

25
$$CH_{3}$$

$$CHCH_{2}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CHCH_{2}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CHCH_{2}$$

$$CH_{3}$$

wherein R represents a hydrogen atom or an alkyl group containing from 1 to about 10 carbon atoms, wherein n represents an integer from 0 to about 10, and wherein m represents an integer from 0 to about 10, with the proviso that the sum of n and m is at least 4; and and

(h) 
$$CH_3$$

$$CHCH_2$$

$$CHCH_2$$

$$CH_3$$

$$(CH_2)_x$$

$$(CH_2)_y$$

$$(CH_2)_y$$

$$(CH_2)_y$$

5

- wherein n represents an integer from 0 to about 10, wherein m represents an integer from 0 to about 10, wherein x represents an integer from 1 to about 10, and wherein y represents an integer from 1 to about 10.
- 25 2. A process as specified in claim 1 wherein the polymerization is initiated with an anionic initiator.
  - 3. A process as specified in claim 2 wherein the anionic initiator is an alkyl lithium compound.
  - 4. A process as specified in claim 13 wherein the functionalized monomer is of the structural formula:

$$CH_3$$
 $C = CH_2$ 
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 

10

- 5. A process as specified in claim 4 wherein n represents the integer 4.
- 6. A process as specified in claim 4 wherein n represents the integer 6.
  - 7. A process as specified in claim 1 wherein the polymerization is conducted in an inert organic solvent.
- 20 8. A process as specified in claim 3 wherein the alkyl lithium compound is n-butyl lithium.
  - 9. A process as specified in claim 1 wherein the functionalized monomer is of the formula:

25

$$CH_3$$
 $C = CH_2$ 
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_2$ 
 $CH_2$ 
 $CH_3$ 
 $CH_2$ 
 $CH_3$ 
 $CH_3$ 

10. A process as specified in claim 1 wherein the functionalized monomer is of the formula:

CH<sub>3</sub>

$$CH_2$$

$$CHCH_2$$

$$CH_3$$

$$CHCH_2$$

$$CH_3$$

$$CHCH_2$$

$$CH_3$$

$$CH_3$$

$$CH_2$$

$$CH_3$$

$$CH$$

11. A process as specified in claim 1 wherein the functionalized monomer is of the formula:

15 
$$CH_2$$
 $CHCH_2$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CHCH_2$ 
 $CH_3$ 
 $CH_3$ 

12. A process as specified in claim 1 wherein the functionalized monomer is of the formula:

25
$$CH_{3}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CHCH_{2}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{2}$$

$$CH_{2}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{2}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{2}$$

$$CH_{3}$$

$$CH_{4}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{4}$$

$$CH_{3}$$

$$CH_{4}$$

$$CH_{4}$$

$$CH_{4}$$

$$CH_{4}$$

$$CH_{4}$$

$$CH_{4}$$

$$CH_{4}$$

$$CH_{4}$$

$$CH_{4}$$

$$CH_{5}$$

$$CH_$$

13. A process as specified in claim 1 wherein the functionalized monomer is of the formula:

5

$$CH_2$$
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 
 $CH_3$ 
 $CHCH_2$ 
 $CH_2$ 
 $CH_2$ 

- 15 14. A process as specified in claim 10 wherein m represents the integer 4.
  - 15. A process as specified in claim 10 wherein  $\ensuremath{\mathtt{m}}$  represents the integer 6.
  - 16. A process as specified in claim 10 wherein n represents the integer 1.
- 17. A process as specified in claim 10 wherein n 25 represents the integer 2.
  - 18. A process as specified in claim 10 wherein n represents the integer 3.